



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------------|------------------------|
| 10/677,779 | 10/01/2003 | Brian Klock | NEC 03008 | 9131 |
| 31688 | 7590 | 12/31/2007 | | |
| TRAN & ASSOCIATES 6768 MEADOW VISTA CT. SAN JOSE, CA 95135 | | | EXAMINER HARPER, LEON JONATHAN | |
| | | | ART UNIT 2166 | PAPER NUMBER |
| | | | MAIL DATE 12/31/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

71

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/677,779 | Applicant(s) KLOCK ET AL. | |
| | Examiner Leon J. Harper | Art Unit 2166 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 28-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/1/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This amendment filed 10/4/2007 has been entered. No claims have been added, cancelled or amended. Accordingly, claims 1-25 and 28-36 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-25, 28-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004 0054662 (hereinafter Work) in view of An Overview of Production Rules in Database Systems (hereinafter Overview) .

As for claim 1: Work discloses: augmenting the system's production rules based on a search strategy (See paragraph 0022 note user can specify whether or not to use the dictionary or thesaurus which in turn specify different search databases or engines); the selection or order of said resources according to the production rules along with the augmented production rules (See paragraph 0023).

Work differs from the claimed invention in that there isn't an explicit teaching of dynamically determining at run-time. Overview however solves the deficiencies of Work by explicitly teaching production rules are dynamically determined at runtime (See pages 5-6,10). It would have been obvious to an artisan of ordinary skill in the pertinent at the time the invention was made to have incorporated the teaching of Overview into the system of Work. The modification would have been obvious because the two references are concerned with the solution to problem using database attributes and configurations to improve functionality and querying of a database. Moreover, overview simply provides a more explicit teaching of the operation of the system in Work; therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the

cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan, would have been motivated to combine the cited references since overview's teaching would enable users to better understand and utilize work's system.

As for claim 2 the rejection of claim 1 is incorporated, and further Work discloses: comprises placing additional constraints on the production rules at run-time (See paragraph 0022).

As for claim 3 the rejection of claim 1 is incorporated, and further Work discloses: comprises nullifying one or more of the production rules at run-time (See paragraph 0024 note: engines can be turned off or not searched).

As for claim 4 the rejection of claim 1 is incorporated, and further Work discloses: specifying the search strategy during run-time (See paragraph 0022 note: difference between pre-configured vs. user configured).

As for claim 5 the rejection of claim 1 is incorporated, and further Work discloses: wherein the search strategy is specified by a user (See paragraph 0022).

As for claim 6 Work discloses: wherein the search strategy is hard-coded (See paragraph 0022 note: preconfigured).

As for claim 7 the rejection of claim 1 is incorporated, and further Work discloses: executing the search strategy over a plurality of search passes over the resources (See paragraph 0029).

As for claim 8 the rejection of claim 7 is incorporated, and further Work discloses: wherein the search strategy of a search pass is modified by a prior search pass (See paragraph 0037).

As for claim 9 the rejection of claim 1 is incorporated, and further Work discloses: wherein the search strategy includes conditional operators that are evaluated during the search (See paragraph 0026).

As for claim 10 the rejection of claim 1 is incorporated, and further Work discloses: wherein one of the resource includes one of query processing resource, result processing resource and data resource (See paragraph 0022 note that search engine is a resource).

As for claim 11 the rejection of claim 1 is incorporated, and further Work discloses: wherein the dynamic determining is controlled in accordance with the search strategy and system state (See paragraph 0022 and paragraph 0028)

As for claim 12 the rejection of claim 1 is incorporated, and further Work discloses: wherein the system state comprises a query (See paragraph 0029).

As for claim 13 the rejection of claim 11 is incorporated, and further Work discloses: wherein the system state comprises one or more messages passed among the resources (See paragraphs 0029 and 0030 note list are passed from engine to engine).

As for claim 14 the rejection of claim 7 is incorporated, and further Work discloses: modifying a query message received from one of the resources during one of said passes for use in a subsequent pass (See paragraph 0029).

As for claim 15 the rejection of claim 14 is incorporated, and further Work discloses: wherein the modifying further comprises assign deleting or changing of one or more keys in the query message (See paragraph 0022).

As for claim 16 the rejection of claim 7 is incorporated, and further Work discloses: modifying a data request received from one of the resources during one of said search passes (See paragraph 0029).

As for claim 17 the rejection of claim 16 is incorporated, and further Work discloses: wherein the modifying further comprises assign deleting or changing of one or more keys in the query message (See paragraph 0022).

As for claim 18 the rejection of claim 7 is incorporated, and further Work discloses: adding a data request directed at one of the resources over a route and altering the route during one of said search passes for use in a subsequent pass (See paragraphs 0038 and 0039 note the research engine is doing the altering).

As for claim 19 the rejection of claim 7 is incorporated, and further Work discloses: directing a query message at one of the resources over a route and altering the route during one of said search passes for use in a subsequent pass See paragraphs 0038 and 0039 note the research engine is doing the altering).

As for claim 20 the rejection of claim 7 is incorporated, and further Work discloses locally routing a message received from one of the resources during one of said search passes for use in a subsequent pass (See paragraph 0035 note: messages are being routed from the rules data store to the research engine).

As for claim 21 the rejection of claim 7 is incorporated, and further Work discloses: globally routing a message received from one of the resources during

one of said search passes for use in a subsequent pass. (See paragraph 0036 note; when the rules are specifying courses of action this has to be done via message passing).

As for claim 22 the rejection of claim 7 is incorporated, and further Work discloses: answering or generating one or more control messages received from one of the resources during one of said passes for use in a subsequent pass (See paragraph 0039, note the rules specify relationships and they are used by the research engine for subsequent passes).

As for claim 23 the rejection of claim 7 is incorporated, and further Work discloses: updating a next pass condition received from one of the resources during one of said search passes for use in a subsequent pass (See paragraph 0040 updating research model).

As for claim 24 the rejection of claim 1 is incorporated, and further Work discloses: optimizing a search result given the strategy and the production rules (See 0037).

Claim 25 is a system claim corresponding to the method claim 1 and is thus rejected for the same reasons as set forth in the rejection of claim 1.

Claim 28 is a computer-implemented method claim corresponding to the method claim 1 and is thus rejected for the same reasons as set forth in the rejection of claim 1.

Claims 29-35 are computer program product claims corresponding to the method claims 1-4,7,8,11 respectively and are thus rejected for the same reasons as set forth in the rejection of claims 1-4,7,8,11.

As for claim 36 the rejection of claim 1 is incorporated and further Work discloses: wherein said using includes providing a query to said one or more resources and receiving at least one result therefrom (See paragraph 0030), wherein said ordering includes determining a sequence in which said resources are queried (See paragraph 0024), and wherein said manipulating includes controlling the operation of said resources (See paragraph 0026).

Response to Arguments

Applicant's arguments filed 10/4/2007 have been fully considered but they are not persuasive.

Applicant argues:

Neither Work nor Overview shows augmenting the production rules based on a search strategy; and 2 Work and Overview are static in contrast to the inventions's dynamically determining at run-time the selection or order of said resources according to the production rule. Applicants further submit that the Office action improperly used hindsight taught by the present invention in arriving at the claimed combination of Work and Overview. Work's paragraph 22 describes a component within the black box - consisting of data (not production rules), where the user can modify this data. Work's paragraph 25 states that this modification is not part of the query (or in Work, 'the inquiry'). Regardless, the system is not augmenting production rules as part of a search strategy, but rather modifying data of a pre-programmed component within the black box. Paragraph 025 of Work defines "the Inquiry" as "... a natural language query, a Boolean logic query specifying one or more search terms, or any combination thereof." This specifically defines what comes from the user at search time - it is by-definition not a strategy. In effect Work shows a system where a user - offline (before the search) can re-program the hard-coded rules through altering the data. Although this might sound similar to instant Invention, it is quite different as the instant system sends the query.

Examiner responds:

Examiner is not persuaded. Claim 1 has been rejected based on the teachings of Work and Overview. Claim 1 requires augmenting the system's production rules based on a search strategy and dynamically determining at run time the selection or order of said resources according to the production rules along with the augmented production rules. Examiner notes: that applicants according to paragraph 0006 of their specification define augmenting as: modifying a query message, wherein the modifying further comprises adding, deleting or changing of one or more keys. Applicants further state in paragraph 0006 that other ways to augment include: modifying a data request by adding, deleting or changing one or more keys, adding a data request, altering a route or altering the resource selection process, locally routing the message or objects to enforce a modified ordering, answering or generating one or more control messages which are data that a strategy can be conditioned on, updating a next pass condition to communicate the need for another pass by the strategy query processor. Therefore of the plurality of items listed in paragraph 0006 as constituting augmenting it is noted that if any one of the items is shown, that showing would match the definition. Accordingly, only the definition of altering a route or altering the resource selection process is used, even though other definitions could be and in fact are taught. Work uses "research rules" and query protocols to specify which engines are searched and also to prioritize the search results of the engines which are used (See paragraph 0023,0024). Therefore

based on the search strategy (i.e. the conditional configuration specified by a user that is evaluated during the search) the system of Work augments (alters the route or alters the resource selection process) its production rules by specifically altering which engines or resources are used and how those engines or resources are routed or prioritized.

Overview provides a more explicit teaching of production rules and how they apply to database systems. According to the teaching of Overview production rules in database systems are either event or condition triggered (See overview pages 0-12). Event triggers occur obviously at the happening of an event such as inserting data, while condition triggers occur when a certain condition is met such as if (engine1 == selected) then search it. *Id.* Production rules can also be a combination event and condition triggered. The key aspect of production rules is that once they are defined, this determines how processing takes place during runtime (See overview page 13). Therefore based on the claims even a hard coded database system would fit the definition of dynamically determining at run-time, since that is in fact when production rules are processed and then event or conditions are either met or not met. This reading of claim 1 is further evidenced by claim 6 and the concept of claim differentiation. Claim 6 states " wherein the search strategy is hard-coded" and claim 6 could not be further limiting the scope of claim 1 unless the strategy being hard coded was something that was claimed in claim 1 however the term search strategy was broader in claim 1 covering hard-coded and non hard coded. However, Work undoubtedly meets either as Work contains the option of having pre-configured

or user defined configuration data. Moreover, examiner believes that any objections raised with regard to dependent claims are cleared up once it is clear how the combination of Work and Overview disclose the independent claims

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon J. Harper whose telephone number is 571-272-0759. The examiner can normally be reached on 7:30AM - 4:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJH
Leon J. Harper
December 25, 2007


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER